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NEWBORN HEALTH

POLICY AND PLANNING FRAMEWORK

PART I: OVERVIEW FOR POLICY MAKERS

World Health Organisation
Saving Newborn Lives

With contributions from the UK Department for International
Development

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Box 1 Neonatal health: Foundation for the future

- Globally, 4 million babies die in the first month of life (the neonatal period).
- Neonatal deaths (defined as those occurring between 0-28 days in live-born infants) represent almost 40% of all deaths in childhood and this proportion will increase over time.
- The Millennium Development Goal of reducing child mortality by two-thirds by 2015 will only be met if there is a significant improvement in newborn survival.
- Effective, low cost interventions to reduce neonatal deaths can be implemented at family, community and health facility levels.
- Most maternal and neonatal deaths occur during childbirth and the immediate post-natal period. Interventions before and during pregnancy and during and after delivery can save the lives of mothers and babies.
- Interventions in the first month of life can also reduce long-term disability and promote behaviours such as breastfeeding, with benefits for the health of children and of the nation.
- Providing a set of comprehensive interventions to reduce neonatal and maternal deaths costs around US\$3 per capita. Countries with limited resources have shown that it is possible to reduce neonatal and maternal deaths.
- Newborn health needs to be addressed by national poverty reduction and health sector plans and interventions integrated into maternal and child health services. Reaching poor and under-served populations will require special attention.

Purpose

The aim of the Newborn Health Policy and Planning Framework is to assist countries with a high burden of neonatal mortality and morbidity to develop strategies to improve newborn health that are integrated with maternal and child health plans and set within broader health and development frameworks.

The Framework outlines a structured approach to developing the newborn health component of a strategy. The approach is consultative and participatory, takes account of national needs and resources, and builds on existing programmes and services. More specifically, the Framework provides guidance on the main steps involved in strategy development:

- Situation analysis – Conducting a situation analysis to assess the extent and causes of newborn mortality and morbidity and the existing capacity of maternal and child health services to address newborn health.
- Prioritising and choosing interventions – Reviewing and prioritising evidence-based interventions, and selecting those that are most appropriate to national needs and available human, financial and institutional resources.
- Intervention delivery – Deciding how best to deliver interventions, including ways to strengthen and create synergies between maternal and child health services and between the health system and the community
- Monitoring and evaluation mechanism – Planning for monitoring and evaluation, including identifying indicators and tools.

The Framework is divided into two parts:

- The current Part 1 provides an overview of the process of developing the newborn health component of a health strategy. It is intended primarily for those who are responsible for policy making, strategic planning and decisions about allocation of resources.
- Part 2 will provide more detailed guidance on the steps involved in developing the newborn health components of a strategy and refer to tools available to support these steps, which will be included on an accompanying CD-Rom. It is intended primarily for those who are directly responsible for managing and implementing programmes and services at national, provincial and district levels. The need for and content of Part 2 will be confirmed as part of piloting Part 1.

Part 1: Overview

1. Introduction

No country can afford to ignore newborn health. Globally, 4 million babies die in the first month of life and neonatal deaths account for almost 4 in 10 deaths in childhood.

Newborn survival can be improved, by implementing available cost-effective interventions and by strengthening existing maternal and child health services. However, for this to happen, countries need a strategy to improve newborn health.

This part of the Framework outlines:

- The importance of incorporating newborn health into development and health policy and planning.
- The rationale for including newborn health into broader strategies.
- The process of developing the newborn health components of a strategy.

2. Incorporating newborn health into development and health policy and planning

Addressing newborn health requires a supportive policy environment. Development of newborn health approaches should take place within existing national policy formulation and planning processes and consultation mechanisms. Many opportunities exist to ensure that national policies and plans support improvements in neonatal health. For example:

- Integrating newborn health with maternal and child health, rather than creating a vertical neonatal health programme, with an emphasis on strengthening or creating synergies between maternal and child health services and between the health system and the community.
- Integrating newborn health interventions into wider development and health sector policy and planning processes. Poverty Reduction Strategy Papers (PRSPs) and Sector Wide Approaches (SWAps) are vehicles for developing comprehensive approaches to newborn health that are linked to safe motherhood and child survival efforts.
- Advancing efforts through human rights approaches and the obligations enshrined in the 1948 Universal Declaration of Human Rights and the 1990 Convention on the Rights of the Child.

The need to address newborn health

Deaths in the first month of life account for 37% of all child deaths. Of the 4 million neonatal deaths annually, 2.8 million occur in the first week of life (the early neonatal period) and 1.2 million between 8 and 28 days of life (the late neonatal period).

The main causes of neonatal death are complications related to delivery or pre-term birth and infections. Most deaths in the early neonatal period are due to causes and risk factors related to pregnancy and delivery. Safe delivery and immediate post-natal care are critical since approximately 40% of neonatal deaths occur in the first day of life. Most deaths in the late neonatal period are due to infections.

Causes of death in the neonatal period

The vast majority – 98% – of neonatal deaths occur in developing countries. An analysis of 193 countries shows that neonatal mortality accounts for between 31% and 98% of infant deaths. Where child deaths from common illnesses such as pneumonia and diarrhoea have been reduced, the contribution of neonatal mortality to under-five mortality has increased. Even in countries with the highest under-five mortality, a significant proportion of deaths occur in the neonatal period. For example, in Ethiopia, neonatal deaths represent nearly a third of childhood deaths, and in India nearly a half.

In addition to neonatal deaths, 500,000 maternal deaths and 4 million stillbirths occur each year, and neonatal morbidity and disability – caused by birth asphyxia, congenital malformations, severe jaundice and infections – represents a significant burden for health services and communities. The neonatal period is also critical for exclusive breastfeeding and bonding with the mother, which are essential for a child's future growth and development.

Critical time periods and interventions

- Pre-pregnancy – Neonatal survival and health are influenced by factors that are present before conception. Maternal educational and social status, nutrition and health, and age, and the time between pregnancies, are important predictors of neonatal outcome. Comprehensive strategies need to emphasise integration with a range of other services such as family planning, and sectors such as poverty reduction and education, as well as synergies between maternal and child health programmes.
- Pregnancy – Appropriate antenatal care is critical to reduce maternal mortality, stillbirths and neonatal deaths. Interventions during pregnancy can reduce premature birth, low birth weight, congenital malformations, congenital infections and neonatal tetanus.
- Labour, delivery and the first 1-2 hours of life – Skilled care at birth to ensure safe and clean delivery benefits mothers and babies. This period is critical for preventing birth asphyxia, birth injuries and infections in the newborn, and provision of supportive care for pre-term babies. Newborns also have special care needs immediately after birth, including establishment of breathing, providing warmth, initiating breastfeeding and preventing and managing life-threatening complications.
- Early neonatal period (week 1) – Provision of basic care for all mothers and newborns, and identifying and managing those in need of special care is critical in the first week of life, when over two-thirds of neonatal deaths, and many maternal deaths, occur. This period is critical for prevention and management of infections in all newborns and for provision of extra care for low birth weight babies and those with complications following delivery. Mortality can be reduced in most moderately low birth weight babies through low-tech approaches that include keeping babies warm, providing breastfeeding support and ensuring early management of complications. Extra care may also require a functional referral system and access to a referral centre where complications can be properly addressed.
- Late neonatal period (weeks 2-4) – Prevention and treatment of infections is the highest priority during this period. The one-third of neonatal deaths that occur in this period can be reduced through interventions to ensure that families recognise the signs of infection and seek care promptly, and that antibiotics are available, accessible and used correctly.

Effective interventions that can be implemented in settings with limited resources are summarised in the box below.

Box 2 Effective newborn health interventions

Antenatal care

- Tetanus toxoid immunization
- Counselling on nutrition, birth preparedness and breastfeeding
- Iron, iodine and folate supplementation
- Identification of major risk of obstructed labour
- Treatment of syphilis and malaria*
- Voluntary counselling and testing for HIV*

Labour, delivery and first 1-2 hours of life

- Clean and safe delivery
- Temperature maintenance
- Immediate and exclusive breastfeeding
- Cord and eye care
- Emergency obstetric care for complications*
- Antibiotics for premature rupture of membranes*
- Neonatal resuscitation*
- Management of newborn complications*
- Prevention of mother to child transmission of HIV*

Newborn care (from 1-2 hours after delivery to 4 weeks)

- Exclusive breastfeeding
- Temperature maintenance
- Cord care and hygiene
- Recognition of danger signs and prompt care seeking
- Counselling on birth spacing
- Special care for the small baby*
- Prevention of mother to child transmission of HIV*
- Management of complications, serious infections, severe jaundice and very low birth weight babies*
- Follow up of newborns in need of special care

Note: All interventions should be available for all pregnant women and newborns except those marked *, which need to be provided only for illness or complications.

Programming to achieve maximum impact on neonatal mortality

Newborn health has received little attention in the past because of the perception that interventions to reduce neonatal mortality and morbidity are complex and costly. However, programme experience in a number of countries has shown that:

- The effective interventions summarised in Table 1 do not require expensive and sophisticated equipment or highly specialised training.
- High coverage with these interventions has the potential to reduce neonatal mortality by at least 70%.
- While selection of interventions needs to take account of the feasibility and cost of implementation, effective interventions can be implemented in a phased manner in settings with limited resources. Although ideally interventions should be provided through pregnancy, delivery and the post-natal period, the most critical time for intervention is during childbirth and the first week of life.
- The cost of providing effective interventions to reduce neonatal and maternal deaths is around US\$3 per capita in resource-poor countries. This investment is important from the equity perspective because women and newborns without access to these interventions are the most vulnerable groups in society. These interventions also have longer-term benefits that go beyond the neonatal period.

Programme experience has also shown that achievement of high coverage with effective interventions requires:

- Linkages between maternal and child health services, and between these and other programmes such as immunisation, family planning, HIV/AIDS and malaria control.
- Contact between mothers and newborns and health services during pregnancy, delivery and the post-natal period, and effective linkages between communities and facilities.
- Activities at household, community and facility levels and multiple channels for delivering interventions (involving collaboration between the public and private sectors, NGOs and other civil society organisations) are required to reach all mothers and newborns.

3. The process of developing the newborn components of a health strategy

Before establishing a process, it is important to assess what steps have already been taken to address both maternal and newborn health. For example, there may be an existing strategy that needs updating or further developing to incorporate a neonatal component.

One way to start is for the Ministry of Health to establish a core group of key stakeholders in newborn health with multidisciplinary expertise to guide the process. Again it is important to assess what mechanisms already exist to bring together relevant stakeholders and expertise before deciding to set up a specific newborn health group. For example, there may be an existing technical advisory committee or working group that could oversee or carry out the work.

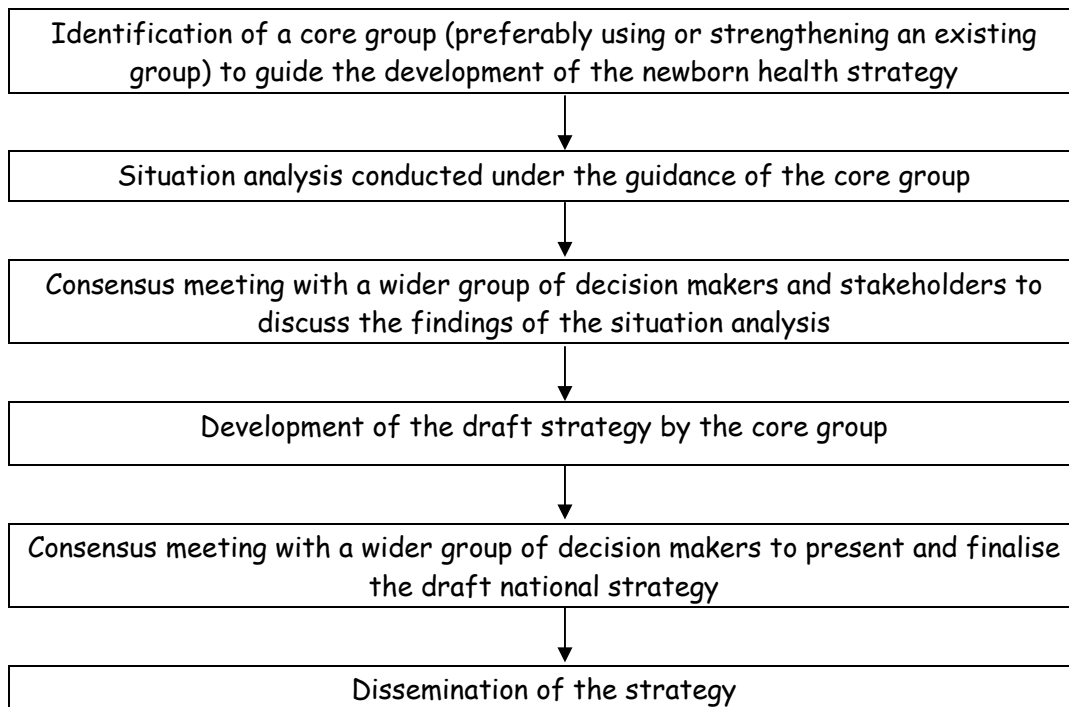
Key stakeholders who need to be involved in the process include policy makers and programme managers from maternal and child health and other relevant areas such as nutrition, immunisation, HIV/AIDS, malaria control, human resources, and essential drugs. It may be necessary to bring in additional expertise in areas such as neonatology, behaviour change communication, community development, and health systems. Inputs from maternal and child health professionals, social scientists and health economists as well as from key multilateral, bilateral and NGO partners may also be needed.

Experience in different countries suggests that expert groups should be limited to no more than 15 members, for practical reasons and to keep the process focused. It is also important to have a group coordinator who is responsible for moving the process forward and who is accountable for results. He or she should be well versed in maternal and child health issues and should have leadership and facilitation skills to ensure progress and mobilise available technical resources.

The stages set out in figure 1 and described below are based on experience in different countries and can be adapted to suit specific national circumstances. The steps talk about developing a newborn health strategy: this will ideally mean developing the newborn health component of a broader strategy.

During the process the core group will need to interact with teams or institutions that have been tasked with specific assignments, for example, conducting the situation analysis, and with a wider group of decision makers, stakeholders and professionals in order to achieve consensus decisions on key issues. Box 3 gives an example from Nepal.

Figure 1 Stages in developing a strategy



Box 3 Developing policy commitment for newborn health in Nepal

The experience of Nepal provides an example of a collaborative process for developing a newborn health strategy. The National Neonatal Health Strategy (NNHS) has its roots in *State of the World's Newborns: Nepal*, a situation analysis based on research from the country's leading health professionals and supported by the Ministry of Health (MOH).

Following the launch of the report, the MOH convened a Newborn Working Group to develop Nepal's newborn health strategy. Representatives from diverse professional backgrounds including neonatology, safe motherhood and community mobilisation worked for five months to create a shared vision of the NNHS. The result was a set of evidence-based priority interventions for newborn care based in the community and linked to the national health system. The NNHS was formally accepted by the government in early 2004 and is being distributed throughout the country as the official statement of newborn health care policy.

To transform policy into action, Nepal's "Long-term Neonatal Health Plan" is being finalised. This operational plan will provide the government, donors and other key stakeholders with implementation guidelines through to 2017.

Moving ahead it will be important harmonise the newborn health plans with the safe motherhood and broader health policies and plans that the government is working with partners to implement

The main steps in developing a strategy

Step 1: Situation analysis

Conducting a national (or sub-national) situation analysis can provide a better understanding of the extent and causes of neonatal mortality and morbidity and the capacity of existing maternal and child health services, and helps to inform the development of the newborn health component of a national strategy. The objectives of the situation analysis are likely to include:

- Describing the status of maternal and newborn health and health care in the country.
- Identifying the strengths of maternal and newborn health care services and any gaps between the existing and desired situation.
- Suggesting strategies to reinforce strengths and address gaps, including identifying human, financial and material resources requirements and taking into account existing health sector plans and development strategies.

Although available data may be limited, for example it may not be nationally representative or may be variable in quality, information should be collected using existing sources as far as possible. Data will need to be disaggregated according to socio-economic status, rural or urban location, ethnic group and other characteristics of interest, to identify the most vulnerable population groups.

Analysis of data collected can be used to compare the existing situation with desired standards, health services and community and family practices, and to provide an overview of key gaps.

Step 2: Prioritising and choosing interventions

Prioritising interventions to address the gaps identified by the situation analysis is essential, especially in contexts where resources are limited and it is not feasible to implement all effective interventions. Decisions about the choice of interventions to be implemented are likely to depend on:

- National goals and targets for newborn health, child survival and maternal health.
- Burden of neonatal mortality and its specific causes.
- Proven effect of an intervention in reducing mortality and its feasibility, cost and acceptability in the specific national context.
- Health system requirements for implementing an intervention, including the human and financial resource implications.

- Coverage and equity considerations to ensure that all newborns, especially those in the poorest families and those likely to be missed by the existing system, are reached.
- Cultural practices and beliefs and health seeking behaviours.

Based on these criteria, interventions expected to have the most impact would be the ones to implement first. Additional interventions can be added later depending on the availability of resources and the results of monitoring and evaluation.

Step 3: Intervention delivery

Deciding how best to deliver the chosen interventions at health facility, community and household level is critical, to ensure maximum impact, high quality, and equitable coverage. Planning for delivery will depend on the capacity of health services, the community context, and available financial, human and material resources. Key considerations in planning are likely to include:

- Designating responsibility for implementing newborn health interventions at different levels of the health system.
- Integrating newborn health interventions into existing services, including maximising synergies with maternal and child and other health services.
- Developing implementation strategies for community, primary and referral levels that will achieve high coverage of the chosen interventions.
- Strengthening health system and human resource capacity.
- Improving household and community newborn and maternal care practices, and links between communities and the health system.

Step 4: Monitoring and evaluation mechanism

Deciding how to monitor implementation of interventions and evaluate their impact is an integral part of the planning process. This includes selecting process and outcome indicators, and identifying tools and methods for measurement. Possible indicators include neonatal mortality rate, skilled attendance at birth, post-natal contact of health workers with mothers and newborns, and timely initiation of breastfeeding.

The box below gives an example of the possible newborn health content a national health strategy. Once a national approach has been developed, the next steps are to ensure that national and sub-national health and development plans, timelines and budgets incorporate the essential elements of newborn health and specify actions.

Box 4 Possible newborn health content of a national strategy

Goals and objectives

- Goals on newborn health
- Specific objectives

National policy statement on newborn health

- Principles
- Standards of care, including clinical guidelines

Interventions to be implemented

- Interventions appropriate for the situation in the country
- Concrete actions required at household, community, first and referral health facility levels

Integration of newborn health interventions into the existing services

- Human resources (responsibility for interventions; staff availability and how to improve it; training needs of health care providers, decisions on training packages; supervision needs, decisions on training packages)
- Strategies to improve synergy between health care providers and community workers
- Material requirements to strengthen the health system (infrastructure needs and prioritisation; equipment needs and prioritisation; supplies needs and prioritisation)

Community involvement

- Strategies to increase demand for improved availability and quality of services
- Strategies to increase adherence to home care, follow-up and referral recommendations, including emergency transportation
- Communications strategy to achieve optimal maternal and newborn care practices at household and community levels

Monitoring and evaluation

- Strategies for process monitoring
- Decisions on evaluation: including baseline assessment, evaluation tools

Financial resources required

- Budget
- Strategy for reallocation of existing resources
- Strategy to find additional resources

4. Conclusion

Neonatal mortality is a significant problem. Taking steps to address newborn health is critical to achievement of the child mortality Millennium Development Goal and to wider child health and development, and can also make a significant contribution to improving maternal health.

Effective interventions are available and can be implemented even in settings where resources are limited. Implementing interventions to improve newborn health is the joint responsibility of governments, maternal and child health professionals, civil society, communities and families, with support from the international community.

The incorporation of evidence-based newborn health interventions into national policies and planning frameworks, integrated with maternal and child health programmes and tailored to the newborn health situation in the country, is an important step towards improved neonatal survival and health.